

**JPL Communications And Systems Research**  
**Section 331 Collection, 1984 – 1989**  
**5.1 cubic feet**  
**JPL 207**

## **History**

Jet Propulsion Laboratory's (JPL), Section 331, Communications and Systems Research, dealt with the on-going development of communication hardware and software technology. Section 331 has remained intact since the early 1960's and currently remains with the same title heading. Some of the projects this section was involved with were developing communication software for the Deep Space Network (DSN) and the All Source Analysis System / Enemy Situation Correlation Element (ASAS/ENSCE) project.

The Deep Space Network (DSN) is a network of communications antennas operated by Jet Propulsion Laboratory (JPL) that monitor communications with spacecraft, both manned and robotic. The DSN was built originally to communicate with the Pioneer and Ranger probes of the late 1950s and early 1960s.

The DSN consists of three deep-space communications facilities placed approximately 120 degrees apart around the world: at Goldstone, in California's Mojave Desert; near Canberra, Australia; and originally near Johannesburg, South Africa. In the mid-1960s, Madrid, Spain replaced Johannesburg as part of the DSN. This strategic placement permits constant observation of spacecraft as the Earth rotates, and helps to make the DSN the largest and most sensitive scientific telecommunications system in the world.

Beginning in the early 1970s, it was realized that the DSN would have to be upgraded due to the more sophisticated Viking and Voyager missions. The three 64-meter antennas were each gradually upgraded to 70-meter antennas, and many of the older antennas were either upgraded or retired. This upgrading has continued to the present day. This includes upgrading or replacing essential hardware, such as computers and data tape recorders.

Also, during the period of 1985 – 1989, Section 331 was heavily involved with an intelligence information fusion system called the ASAS/ENSCE (All Source Analysis System / Enemy Situation Correlation Element) project, which was started in 1982. This was a project initially for the United States Army, which later included the Airforce. It was to collect, transfer, analyze and process data for battlefield commanders. Several contractors besides JPL worked on this project as well. The first release of software, version 1.0, occurred in April 1988, with over 500,000 lines of code. The ASAS/ENSCE was delivered to the U.S. Army at Ft. Hood, Texas. The ASAS/ENSCE was a network of mobile, truck-mounted hardware and software which collected, analyzed and merged data from all intelligence sources for use by field commanders in making tactical decisions. By 1993, a third operational system was in the field.

The successful running of the ASAS/ENSCE project was plagued by highly volatile requirements and a resultant low rate of productivity of lines of source code per unit time. By Mid 1985, JPL had fallen behind the contracted deadline because of management, funding and the security restraints.

## **Provenance**

Yolanda Castillo, who worked for the Jet Propulsion Laboratory, Section 331, Communications and Systems Research, transferred the collection to the JPL Archives on November 29, 1993. She was the collector of material; the originators were the Managers and Assistant Managers: Dr. Leslie J. Deutsch, William Rafferty, Jewel Huls, Alfred R. Paiz and other engineers working within Section 331.

## **Collection Arrangement and Description**

The bulk of the collection consists of reports, memoranda, notes, letters, charts, diagrams, graphs and ledgers, pertaining to JPL Section 331's involvement with Communication Hardware and Software, the Deep Space Network (DSN) and the ASAS/ENSCE project. Also some of the documents pertain to Section 331

administrative matters, such as travel vouchers, resumes, retirement announcements, student internships and new hires, January 1985 – December 1989.

The collection is arranged in 746 file folders. The section's File Clerk had filed materials in separate file folders and binders and specifically labeled them by a subject matter or document number. The original filing order has been retained, although internal evidence in the files indicates the collection was originally a part of a larger numeric-filing scheme, here incomplete.

The collection lacks any specific internal abstract description, overview or evaluation of JPL Section 331's activities, although its historical value in general is as a description of the operation of Section 331. Most acronyms used in the collection are defined in Part L of Martha Martinez, editor, *Abbreviations and Acronyms Guide*, JPL 1030-30 Rev. A, May 1980. A copy is available in the repository.

## **Conservation/Preservation**

Standard preparations of documents for long term storage were completed.

## **Separation Statement**

No materials were separated from the collection.

## **Finding Aids**

No other finding aids exist.

## **FILE FOLDER LIST**

### **Box 1 of 17**

#### JPL Interoffice Memorandums from Dr. Leslie J. Deutsch:

- |        |  |
|--------|--|
| Fld 1  | JPL Interoffice Memorandum (IOM), re: Weekly Activities Report for Week Ending March 29, 1985.       |
| Fld 2  | JPL IOM, re: Weekly Activities Report for Week Ending March 22, 1985.                                |
| Fld 3  | JPL IOM, re: Reed-Solomon Codes, October 30, 1980.   |
| Fld 4  | JPL IOM, re: Reed-Solomon Codes, November 3, 1980.   |
| Fld 5  | JPL IOM, re: Clarification of Array Comparisons Graph, January 29, 1981.                             |
| Fld 6  | JPL IOM, re: Measurement of Antenna Arraying Performance, March 16, 1981.                            |
| Fld 7  | JPL IOM, re: Further Considerations about Antenna Arraying Performance Measures, March 17, 1981.     |
| Fld 8  | JPL IOM, re: Concatenated Channel Performance as a Function of Virtual Zero Fill, November 30, 1981. |
| Fld 9  | JPL IOM, re: Records Roundup, June 16, 1982.   |
| Fld 10 | JPL IOM, re: Channel Symbol Arraying at Parks/Canberra, July 14, 1982.                               |

Fld 11 JPL IOM, re: Proposed JPL Highlight Item "Reed-Solomon Coding Hardware at JPL", July 26, 1982.

Fld 12 JPL IOM, re: Further Thoughts on Telemetry System Analysis and Algorithm Development, October 26, 1982.

Fld 13 JPL IOM, re: The Very Large Scale Integration (VLSI) Butterfly Switch Proposal, November 3, 1982.

Fld 14 JPL IOM, re: Input for Annual Report "Applications of VLSI to Channel Coding", December 2, 1982.

Fld 15 JPL IOM, re: VLSI VAX Procurement, February 15, 1983.

Fld 16 JPL IOM, re: Fabrication of JPL VLSI Chips, February 1, 1983.

Fld 17 JPL IOM, re: Review of "Telemetry Channel Coding, Issue 2", March 14, 1983.

Fld 18 JPL IOM, re: Enclosed Draft of Coding Guideline Rationale, April 13, 1983.

Fld 19 JPL IOM, re: Merit Review, Publication Lists, June 15, 1983.

Fld 20 JPL IOM, re: Comments on the latest version of the Telemetry Channel Coding Guidelines, June 16, 1983.

Fld 21 JPL IOM, re: Review of Channel Coding Glossary, June 22, 1983.

Fld 22 JPL IOM, re: The ability to secure the Digital Signal Processing Research Lab, August 11, 1983.

Fld 23 JPL IOM, re: Some Topics for a Microelectronics Proposal, August 15, 1983.

Fld 24 JPL IOM, re: Purchase of EPSON FX-80 Computer Printer/Plotter, August 26, 1983.

Fld 25 JPL IOM, re: Acting Supervisor for the Week of October 3, 1983, September 29, 1983.

Fld 26 JPL IOM, re: 1983 Safety Inspections, September 29, 1983.

Fld 27 JPL IOM, re: Assignment of Alternate Acting Supervisor, October 24, 1983.

Fld 28 JPL IOM, re: Use of Omura-Massey Multipliers in Reed-Solomon Decoders, October 24, 1983.

Fld 29 JPL IOM, re: Recycling of Computer Output Paper, November 22, 1983.

Fld 30 JPL IOM, re: Appointment of a Group Supervisor, December 9, 1983.

Fld 31 JPL IOM, re: Annual Section 331 Christmas Party, December 19, 1983.

Fld 32 JPL IOM, re: Goddard/JPL Cross support of Telemetry Coding, December 22, 1983.

Fld 33 JPL IOM, re: The DSN's Capability for NRZ-M Modulation, January 3, 1984.

Fld 34 JPL IOM, re: Proposal of research to determine the effects of NRZ-M Modulation on Viterbi coding, January 3, 1984.

Fld 35 JPL IOM, re: Assignment of S. S. Brokl as Cognizant Hardware Engineer for the Planetary Radar High Speed Data Acquisition System, January 10, 1984.

Fld 36 JPL IOM, re: Comments on Preliminary Specifications for New Maximum Likelihood Convolutional Decoder (MCD), January 16, 1984.

Fld 37 JPL IOM, re: A Farewell to Ralph West, February 13, 1984.

Fld 38 JPL IOM, re: Definition of S. S. Brokl's role as "Cognizant Hardware Engineer", March 9, 1984.

Fld 39 JPL IOM, re: One page Summary Sheets for Architectures and Algorithms for Very High Speed Digital Filtering, March 30, 1984.

Fld 40 JPL IOM, re: Changes that bring the Cognizant Design Engineer (CDE) Structure of the Planetary Radar Subsystems up to date, June 18, 1984.

Fld 41 JPL IOM, re: Proposed Employment of In-Shek Hsu, a Foreign National, June 19, 1984.

Fld 42 JPL IOM, re: New Employee in Digital Signal Processing Group, August 17, 1984.

Fld 43 JPL IOM, re: Laboratory Space, August 30, 1984.

Fld 44 JPL IOM, re: VAX Computer Manuals, September 24, 1984.

Fld 45 JPL IOM, re: New Employee in the group: Gene Rodemich, September 26, 1984.

Fld 46 JPL IOM, re: Data Compression for the Atmospheric Trace Molecules Observed by Spectroscopy (ATMOS) Fourier Spectrum Spectrometer, October 5, 1984.

Fld 47 JPL IOM, re: Acting Group Supervisor, October 11, 1984.

Fld 48 JPL IOM, re: Reed-Solomon Code Synchronization Revisited, October 12, 1984.

Fld 49 JPL IOM, re: Visiting Speakers from the MITRE Corporation, November 19, 1984.

Fld 50 JPL IOM, re: Justification for the ADP Procurement of an IBM AT based Personal Graphics Design Station, November 24, 1984.

Fld 51 JPL IOM, re: Proposed Salary price-out for Jason Lo, November 28, 1984.

Fld 52 JPL IOM, re: GaAs Working Group, November 28, 1984.

Fld 53 JPL IOM, re: Extension of Contract #956981 "Performing a Very Large Scale Integrated (VLSI) Circuit Chip Layout of a Low-Resolution Accumulator Chip, November 29, 1984.

Fld 54 JPL IOM, re: Request for after-hours On-Lab Parking, November 30, 1984.

Fld 55 JPL IOM, re: Section 331, Group Meeting, December 7, 1984.

Fld 56 JPL IOM, re: GaAs Task Summary, December 7, 1984.

Fld 57 JPL IOM, re: Section 331, Group Meeting, December 13, 1984.

Fld 58 JPL IOM, re: Section 331 Lobby Display, December 13, 1984.

Fld 59 JPL IOM, re: Rap Representatives, January 3, 1984.

Fld 60 JPL IOM, re: Proposed Salary price-out for Erlend Olson, January 4, 1984.

Fld 61 JPL IOM, re: the Operation of the Communications Systems Research VAX, February 4, 1985.

Fld 62 JPL IOM, re: Assignment of Alternate, February 4, 1985.

Fld 63 JPL IOM, re: Proposed appointment of Joshua Wong as a Summer Faculty Fellow, February 4, 1985.

Fld 64 JPL IOM, re: First Meeting of VAX VIPS, February 8, 1985.

Fld 65 JPL IOM, re: Results of the First Meeting of VAX VIPS, February 22, 1985.

Fld 66 JPL IOM, re: Section VAX Serial Ports, March 1, 1985.

Fld 67 JPL IOM, re: Working In-house VLSI Chips, March 5, 1984.

Fld 68 JPL IOM, re: Purchase of QMS Laser Printer for RTOP 72, March 11, 1985.

Fld 69 JPL IOM, re: Locks for Rooms 238-410 and 410A, April 15, 1985.

Fld 70 JPL IOMs, re: Request for After-Hours On-Lab Parking, April 1985.

Fld 71 JPL IOM, re: Single Source Justification for the Task "VLSI CAD System Upgrade", April 25, 1985.

Fld 72 JPL IOMs, pertaining to Section 331 Personnel issues, May – June 1985.

Fld 73 JPL IOM, re: Proposed Data Processing of Venus Balloon Tapes, June 19, 1985.

Fld 74 JPL IOM, re: Ray Jurgens as Acting Supervisor, June 21, 1985.

Fld 75 JPL IOM, re: Data for 1985 Merit Review, June 28, 1985.

Fld 76 JPL IOM, re: 1986 Director's Discretionary Fund Proposals, July 10, 1985.

Fld 77 JPL IOMs, pertaining to George Downs Appointment as Acting Supervisor, July 1985.

Fld 78 JPL IOM, re: VAX VIPS meeting on 1986 Maintenance Contract, July 19, 1985.

Fld 79 JPL IOM, re: Personnel that will charge to Fiscal Year (FY)'86 Radar accounts, July 31, 1985.

Fld 80 JPL IOM, re: A proposed JPL Highlight for RTOP 72, August 13, 1985.

Fld 81 JPL IOM, re: Comments on BLSI Education at JPL, August 15, 1985.

Fld 82 JPL IOM, re: The Software Agency (TSA) proposal for VLSI System upgrade, August 16, 1985.

Fld 83 JPL IOM, re: New Macro Set (MS) for JPL memorandums, August 16, 1985.

Fld 84 JPL IOM, re: Promotion of S. S. Brokl to Level E5, August 20, 1985.

Fld 85 JPL IOM, re: JPL Letterhead on 20-Pound Bond, August 26, 1985.

Fld 86 JPL IOM, pertaining to Section 331 Personnel matters, September 1985.

Fld 87 JPL IOM, re: Move of UNIX VAX into new laboratory, September 24, 1985.

Fld 88 JPL IOM, re: Review of the Director's Discretionary Fund (DDF) Proposal "Integrated Circuit Simulation on the Hypercube", by G. Jennings and M. Buehler, September 30, 1985.

Fld 89 JPL IOM, re: Use of Computer Facilities during non-normal hours, October 11, 1985.

Fld 90 JPL IOM, re: Overall financial performance of 430 accounts for FY'85, October 14, 1985.

Fld 91 JPL IOM, re: Request for After Hour on-lab parking for Erland Olson, October 17, 1985.

Fld 92 JPL IOM, re: Appointment of Ray Jurgens as Acting Supervisor, October 28, 1985.

Fld 93 JPL IOM, re: A proposed entry to the JPL Annual Report, October 29, 1985.

Fld 94 JPL IOM, re: Sole source justification for Tecmar color monitor, October 29, 1985.

Fld 95 JPL IOM, re: A proposed entry to the JPL Annual Report, October 30, 1985.

Fld 96 JPL IOM, re: Request to put G. Downs on call, November 18, 1985.

Fld 97 JPL IOMs, pertaining to an update of "good chips" produced in Section 331, November 1985.

Fld 98 JPL IOMs, pertaining to various personnel matters, November – December 1985.

Fld 99 JPL IOM, re: Long range plans for the Digital Signal Processing Research group, December 31, 1985.

Fld 100 JPL IOM, re: Proposed moves of computer facilities "Potential Move of Computer Facilities" to Division 33, January 6, 1986.

**Box 2 of 17**

Fld 101 JPL IOM, re: Appointment of Erlend Olson as Acting Supervisor, January 14, 1986.

Fld 102 JPL IOM, re: Technology Assessment Subtask, January 15, 1986.

Fld 103 JPL IOMs, pertaining to various Section 331 Personnel matters, parking, badges, etc., January – February 1986.

Fld 104 JPL IOM, re: A University Contract to Support Minority Graduate Students, February 20, 1986.

Fld 105 JPL IOM, re: Exception to the Limitation for Compensation Rate for Dr. George S. Downs, February 24, 1986.

Fld 106 JPL IOM, re: DDF Interim Reports, March 13, 1986.

Fld 107 JPL IOM, re: Public domain for the IBM PC, March 31, 1986.

Fld 108 JPL IOM, re: Appointment of Ray Jurgens as Acting Supervisor, April 3, 1986.

Fld 109 JPL IOM, re: Special seminar by Dr. J. Proakis, April 4, 1986.

Fld 110 JPL IOM, re: Division Reorganization, April 14, 1986.

Fld 111 JPL IOM, re: Automatic Data Processing (ADP) Representative, April 14, 1986.

Fld 112 JPL IOM, re: Interim Status of the Group, April 14, 1986.

Fld 113 JPL IOM, re: Weekly Activities Report for Week Ending 4/13/86, April 15, 1986.

Fld 114 JPL IOM, re: Added responsibilities for Stan Brokl, April 17, 1986.

Fld 115 JPL IOM, re: Performance Evaluations, April 18, 1986.

Fld 116 JPL IOM, re: Institutional Technical Computer Survey, April 16, 1986.

Fld 117 JPL IOMs, re: Running and Walking for JPL and Invitation list for JPL Open House, April 21, 1986.

Fld 118 JPL IOM, re: Weekly Activities Report for Week Ending 4/20/86, April 22, 1986.

Fld 119 JPL IOM, re: Results of Computer Survey for Section 331, April 22, 1986.

Fld 120 JPL IOMs, re: Enforcing of Goldstone Regulations, April 22-23, 1986.

Fld 121 JPL IOMs, pertaining to Section 331 Staff Meetings and planned vacations, April 1986.

Fld 122 JPL IOM, re: Weekly Activities Report for Week Ending 4/29/86, April 29, 1986.

Fld 123 JPL IOMs, re: Section 331, New Appointments, May 5, 1986.

Fld 124 JPL IOM, re: Weekly Activities Report for Week Ending 5/4/86, May 6, 1986.

Fld 125 JPL IOM, re: Resident Research Associateships, May 6, 1986.

Fld 126 JPL IOM, re: Les Deutsch's Trip to NASA Headquarters, May 7, 1986.

Fld 127 JPL IOM, re: Some Personal Computer Concerns, May 9, 1986.

Fld 128 JPL IOMs, pertaining to Section 331 Division Rankings and Assignment of Alternates, May 1986.

Fld 129 JPL IOM, re: Weekly Activities Report for Week Ending 5/11/86, May 13, 1986.

Fld 130 JPL IOM, re: Resident Research Associateships, May 19, 1986.

Fld 131 JPL IOM, re: Weekly Activities Report for Week Ending 5/18/86, May 20, 1986.

Fld 132 JPL IOM, re: Proposed procurement of ADP equipment for Section staff, May 21, 1986.

Fld 133 JPL IOM, re: Weekly Activities Report for Week Ending 5/25/86, May 27, 1986.

Fld 134 JPL IOM, re: Goldstone Travel for Section 331 for June 1986, May 28, 1986.

Fld 135 JPL IOMs, re: New Supervisor for the Digital Signal Processing (DSP) Research Group, May 29, 1986.

Fld 136 JPL IOM, re: Section 331 Office Space Requirements, May 29, 1986.

Fld 137 JPL IOM, re: Telecommunications and Data Acquisition (TDA) Progress Report 42-86, May 26, 1986.

Fld 138 JPL IOM, re: New System Manager for Escher, June 2, 1986.

Fld 139 JPL IOM, re: Weekly Activities Report for Week Ending 6/1/86, June 3, 1986.

Fld 140 JPL IOM, re: Absence Announcements, June 4, 1986.

Fld 141 JPL IOMs, pertaining to a SDI Center Proposal for flight SAR, June 1986.

Fld 142 JPL IOM, re: Weekly Activities for Week Ending 6/8/86, June 10, 1986.

Fld 143 JPL IOM, re: Methods of Reporting Task Plans and Progress, June 10, 1986.

Fld 144 JPL IOM, re: Division's choice of proposal ideas to be presented, June 11, 1986.

Fld 145 JPL IOM, re: Weekly Activities for Week Ending 6/15/86, June 17, 1986.

Fld 146 JPL IOM, re: A new role for Firouz Naderi, June 20, 1986.



Fld 147 JPL IOM, re: Weekly Activities for Week Ending 6/22/86, June 24, 1986.

Fld 148 JPL IOM, re: Call and Guidelines for Proposals to the Director's Discretionary Fund for FY'87, June 26, 1986.

Fld 149 JPL IOM, re: Meeting Notice – WAD Guidelines Review, April 17, 1986.

Fld 150 JPL IOM, re: Use of a Video Conferencing Facility, April 22, 1986.

Fld 151 JPL IOM, re: Optoelectronics, April 28, 1986.

Fld 152 JPL IOM, re: Unconstrained Mission set for the Lightweight Spacecraft Study, April 29, 1986.

Fld 153 JPL IOM, re: Seminar given by Michael Isnardi, a PhD Candidate from Massachusetts Institute of Technology (MIT), May 9, 1986.

Fld 154 JPL IOM, re: University of Illinois Computer Sciences and Engineering: First Visitor, May 5, 1986.

Fld 155 JPL IOM, re: A New MSAT-X Subtask Manager, May 12, 1986.

Fld 156 JPL IOM, re: Respiratory Protection Devices, May 15, 1986.

Fld 157 JPL IOM, re: CMPnet Funding Allocated, May 16, 1986.

Fld 158 JPL IOM, re: EOS Data Systems SR&T Tasks, May 19, 1986.

Fld 159 Letter from Dr. Leslie Deutsch (JPL) to Professor Ahmed Sameh (University of Illinois), re: Re-review of "Integer Division in Linear Time with Bounded Fan-in", May 27, 1986.

Fld 160 JPL IOM, re: New Regulations for Visitors to the Madrid DSN Complex, July 30, 1986.

Fld 161 JPL IOM, re: attached set of DDF proposal abstracts from Section 331, July 8, 1986.

Fld 162 JPL IOMs, pertaining to Personnel matters, security clearances and On-lab parking, July 1986.

Fld 163 JPL IOM, re: Weekly Activities for Week Ending 7/6/86, July 8, 1986.

Fld 164 JPL IOM, re: Appointment of Laif Swanson to Supervisor of Information Processing (IP) Group, July 10, 1986.

Fld 165 JPL IOM, re: Change in Cognizant Person to sign for Door Keys, July 14, 1986.

Fld 166 JPL IOMs, re: Weekly Activities for Week Endings 7/13/86 and 7/20/86, July 1986.

Fld 167 JPL IOM, re: Topics for 1986 JPL Highlights, July 22, 1986.

Fld 168 JPL IOM, re: Ideas for how the Section 331 VAX should be run, July 23, 1986.

Fld 169 JPL IOM, re: Goldstone Travel for Section 331 for August 1986, July 23, 1986.

Fld 170 JPL IOM, re: Weekly Activities for Week Ending 7/27/86, July 29, 1986.

**Box 3 of 17**

Fld 171 JPL IOMs, pertaining to Want Ads and Rap Reps, July 1986.

Fld 172 JPL IOM, re: DDF-2, Call for Proposals for FY'87, August 1, 1986.

Fld 173 JPL IOM, re: Weekly Activities for Week Ending 8/3/86, August 5, 1986.

Fld 174 JPL IOM, re: Director's Discretionary Fund – (attached) Final Proposals, August 11, 1986.

Fld 175 JPL IOM, re: Weekly Activities for Week Ending 8/10/86, August 12, 1986.

Fld 176 JPL IOMs, re: Contacts for Professional Societies, August 18, 1986.

Fld 177 JPL IOM, re: New MSAT Task Manager, August 19, 1986.

Fld 178 JPL IOM, re: Proposed visit of R.P. Mathison's Son to the Lab, August 19, 1986.

Fld 179 JPL IOM, re: Weekly Activities for Week Ending 8/17/86, August 19, 1986.

Fld 180 JPL IOM, re: Payment for Jury Duty Service for Dr. Bonny Schumaker, August 20, 1986.

Fld 181 JPL IOM, re: Goldstone Travel for Section 331 for September 1986, August 25, 1986.

Fld 182 JPL IOM, re: Cost of converting the CSR VAX to UNIX Systems, August 26, 1986.

Fld 183 JPL IOMs, re: Weekly Activities for Week Endings 8/24/86 – 9/28/86, August – September 1986.

Fld 184 JPL IOMs, re: System for Resources Management (SRM) "Cut List", September 30, 1986 and October 1, 1986.

Fld 185 JPL IOM, re: Section 331 Workforce Plan, October 2, 1986.

Fld 186 JPL IOM, re: Assignment of Alternate George Morris, October 3, 1986.

Fld 187 JPL IOM, re: Request for Exception to Travel Report Policy, October 8, 1986.

Fld 188 JPL IOM, re: Weekly Activities for Week Ending 10/5/86, October 7, 1986.

Fld 189 JPL IOM, re: Installation of Door Locks, October 14, 1986.

Fld 190 JPL IOM, re: Weekly Activities for Week Ending 10/12/86, October 14, 1986.

Fld 191 JPL IOM, re: Updated plan of absences from the Laboratory, October 15, 1986.

Fld 192 JPL IOM, re: Weekly Activities for Week Ending 10/19/86, October 21, 1986.

Fld 193 JPL IOMs, re: Goldstone Travel for Section 331 for September 1986.

Fld 194 JPL IOM, re: Lost Key, October 27, 1986.

Fld 195 JPL IOM, re: Weekly Activities for Week Ending 10/26/86, October 28, 1986.

Fld 196 JPL IOM, re: FY'87 Conference Travel Budget Proposal, November 4, 1986.

Fld 197 JPL IOM, re: Section 331 Technology and Space Program Development (TSPD) Allocation, November 4, 1986.

Fld 198 JPL IOM, re: Weekly Activities for Week Ending 11/4/86, November 4, 1986.

Fld 199 JPL IOM, re: Subtopics for the 1987 SBIR Program Solicitation, November 5, 1986.

Fld 200 JPL IOMs, pertaining to Section 331 Personnel matters, parking violations, JPL Open House, pictures and group supervisor appointment, November 1986.

Fld 201 JPL IOM, re: Weekly Activities for Week Ending 11/11/86, November 11, 1986.

Fld 202 JPL IOM, re: Request for Action (RFA)'s from the X-band Uplink Level-D Review, November 17, 1986.

Fld 203 JPL IOM, re: Weekly Activities for Week Ending 11/16/86, November 18, 1986.

Fld 204 JPL IOMs, re: Results of the X-Band Uplink Level-D Design Review, November 21, 1986.

Fld 205 JPL IOM, re: Weekly Activities for Week Ending 11/23/86, November 24, 1986.

Fld 206 JPL IOMs, pertaining to Section 331 Personnel matters, parking violations and procurement quick-reference guides, November and December 1986.

Fld 207 JPL IOM, re: Caltech President's Fund Proposals - 1987, December 9, 1986.

Fld 208 JPL IOMs, re: Weekly Activities for Week Endings 12/7/86 and 12/14/86, December 1986.

Fld 209 JPL IOMs, pertaining to Section 331 Personnel matters, holiday parties, group pictures and assignment of alternate George Morris, December 1986.

Fld 210 JPL IOM, re: Weekly Activities for Week Ending 12/28/86, December 30, 1986.

Fld 211 JPL IOM, re: 1986 Annual Walk-Through of Section 331, January 5, 1987.

Fld 212 JPL IOM, re: Advanced Development Candidates from Section 331, January 7, 1987.

Fld 213 JPL IOM, re: Weekly Activities for Week Ending 1/4/87, January 6, 1987.

Fld 214 JPL IOM, re: Message Analysis Assistant Task, January 7, 1987.

Fld 215 JPL IOM, re: Division 33 Task Contract, with attached letters, January 12, 1987.

Fld 216 JPL IOM, re: Weekly Activities for Week Ending 1/11/87, January 13, 1987.

Fld 217 JPL IOMs, re: Employee clearances of Dean Hardi and Charles C. Wang, January 19, 1987.

Fld 218 JPL IOM, re: Weekly Activities for Week Ending 1/11/87, January 13, 1987.

Fld 219 JPL IOM, re: Division 33 Task Contract Requirements, January 19, 1987.

Fld 220 JPL IOMs, re: RFA's from the X-band Uplink Level-D Review, January 20, 1987.

Fld 221 JPL IOM, re: Hydrogen Maser Sustaining Engineering, January 21, 1987.

Fld 222 JPL IOM, re: New Section 331 Workforce Allocations, January 26, 1987.

Fld 223 JPL IOM, re: Weekly Activities for Week Ending 1/25/87, January 27, 1987.

Fld 224 JPL IOMs, pertaining to Section 331 Personnel matters, business cards, contracted work and want ads, January and February 1987.

Fld 225 JPL IOM, re: Weekly Activities for Week Ending 2/1/87, February 3, 1987.

Fld 226 JPL IOMs, pertaining to Section 331 Personnel matters, after-hours parking and foreign travel forecast, February 1987.

Fld 227 JPL IOM, re: Weekly Activities for Week Ending 2/8/87, February 9, 1987.

Fld 228 JPL IOMs, pertaining to Section 331 Personnel matters, bottled water use, less than 40 hours work and after-hour parking, February 1987.

Fld 229 JPL IOM, re: Weekly Activities for Week Ending 2/15/87, February 17, 1987.

Fld 230 JPL IOM, re: Cheli Warehouse Storage, February 19, 1987.

Fld 231 JPL IOM, re: Weekly Activities for Week Ending 2/3/87, February 23, 1987.

Fld 232 JPL IOM, re: Cheli Warehouse Storage, March 2, 1987.

Fld 233 JPL IOM, re: Weekly Activities for Week Ending 3/3/87, March 3, 1987.

Fld 234 JPL IOMs, pertaining to Section 331 Personnel matters, after hours On-lab parking, absence announcements, sexual harassment and secretarial typesetting software, February – March 1987.

Fld 235 JPL IOMs, re: Weekly Activities for Week Endings 3/8/87, 3/15/87 and 3/24/87, March 1987.

Fld 236 JPL IOM, re: Phase Noise and Allan Variance System task, March 31, 1986.

Fld 237 JPL IOM, re: Weekly Activities for Week Ending 3/29/87, March 31, 1987.

- Fld 238 JPL IOMs, pertaining to Section 331 Personnel matters, new employee seminars, secretarial word processing software and request for after-hours On-lab parking, March – April 1987.
- Fld 239 JPL IOM, re: Weekly Activities for Week Ending 4/5/87, April 7, 1987.
- Fld 240 JPL IOMs, pertaining to Section 331 Personnel matters, merit review ranking and selection of Deputy Manager, April 1987.

**Box 4 of 17**

- Fld 241 JPL IOM, re: NASA Inter-center Competition / JPL Section Challenge, April 8, 2001.
- Fld 242 JPL IOMs, re: Weekly Activities for Week Endings 4/14/87 and 4/28/1987, April 1987.
- Fld 243 JPL IOMs, pertaining to Section 331 Personnel matters, JPL open house, Cheli facilities, FY'88 projections, alternate assignment, building 238 renovation, FY'88 and '89 work years exercise and fall recruiting schedules, April – May 1987.
- Fld 244 JPL IOM, re: Weekly Activities for Week Ending 4/26/87, May 13, 1987.
- Fld 245 JPL IOMs, pertaining to Section 331 Personnel matters, proposed speakers, Macintosh cloning, honoring Professor Mos Kaveh, want ads, FY'88 work force exercise, alternate assignment and thank you memorandum, May – June 1987.
- Fld 246 JPL IOM, re: Weekly Activities for Week Ending 6/21/87, June 23, 1987.
- Fld 247 JPL IOM, re: enclosed DDF-1 and DDF-2 Proposal Summaries, June 29, 1987.
- Fld 248 JPL IOM, re: Division 35 Service Review, January 4, 1987.
- Fld 249 JPL IOMs, pertaining to Section 331 Personnel matters, role of Deputy Manager, job posting requirements and JPL parking at Caltech, December 1987 – January 1988.
- Fld 250 JPL IOM, re: 1988 Aerospace Engineering Conference and Show (AECS), January 5, 1988.
- Fld 251 JPL IOM, re: Call for Papers and NASA Guidelines for 1988 International Aeronautical Federation (IAF) Meeting (said papers are attached), January 5, 1988.
- Fld 252 JPL IOM, re: Section 331 Activities Report for Week Ending 1/8/89, January 10, 1988.
- Fld 253 JPL IOMs, pertaining to Section 331 Personnel matters, Rap Rep meeting schedules and JPL Parking, January 1988.
- Fld 254 JPL IOM, re: Weekly Activities for Week Ending 1/10/88, January 12, 1988.
- Fld 255 JPL IOM, re: Professional Development Enrollment by Invitation – Spring 1989, January 17, 1988.
- Fld 256 JPL IOM, re: Weekly Activities Report for Week Ending 1/15/89, January 17, 1988.

Fld 257 JPL IOMs, pertaining to Section 331 Personnel matters, Capital Equipment plan, required physicals and eye exams and Dick Sydnor's travel plans to Italy, January 1988.

Fld 258 JPL IOM, re: Weekly Activities for Week Ending 1/17/88, January 19, 1988.

Fld 259 JPL IOMs, pertaining to Section 331 Personnel matters, annual section pictures and R.J. McEliece's consulting arrangement, January 1988.

Fld 260 JPL IOM, re: Call for Mission Concepts for DARPA LIGHTSAT, January 20, 1988.

Fld 261 JPL IOM, re: Section 331 Activities Report for Week Ending 1/22/89, January 23, 1988.

Fld 262 JPL IOM, re: GaAs IC Frequency Ranges, January 29, 1988.

Fld 263 JPL IOM, re: Liaison Officers for RIMTech and the Technology Affiliates Program, February 1, 1988.

Fld 264 JPL IOMs, pertaining to Section 331 Personnel matters, travel plans, section surplus list, 1988 summer facility fellowship, TDA progress report, R.J. McEliece's consulting arrangement and extension of JPL expediter privilege for R.D. Buck, February 1988.

Fld 265 JPL IOMs, re: Caltech Master-of-Engineering Program, February 1988.

Fld 266 JPL IOMs, re: Weekly Activities for Week Endings 2/14/88 and 2/21/88, February 1988.

Fld 267 JPL IOMs, pertaining to Section 331 Personnel matters, possible job candidate, new RTOP for Viterbi decoder work and section surplus allocations, February 26, 1988.

Fld 268 JPL IOMs, re: Section 331 Activities Report for Week Ending 2/29/88 and 3/7/88, March 1988.

Fld 269 JPL IOMs, pertaining to Section 331 Personnel matters, All Source Analysis System (ASAS) foreign travel forecasts and want ads, March 1988.

Fld 270 JPL IOM, re: Support of Magellan test plan evaluation, March 8, 1988.

Fld 271 JPL IOM, re: Section 331 Activities Report for Week Ending 3/13/88, March 15, 1988.

Fld 272 JPL IOMs, re: Division 33 TAP TRACK-2 Review Agenda, March 1988.

Fld 273 JPL IOM, re: Section 331 Activities Report for Week Ending 3/20/88, March 22, 1988.

Fld 274 JPL IOM, re: Merit Review and Performance Evaluation for Section 331, March 25, 1988.

Fld 275 JPL IOM, re: Section 331 Activities Report for Week Ending 3/27/88, March 29, 1988.

Fld 276 JPL IOM, re: Bill Hurd's new appointment, April 4, 1988.

Fld 277 JPL IOM, re: Section 331 Activities Report for Week Ending 4/3/88, April 5, 1988.

- Fld 278 JPL IOM, re: Semiannual NASA Intercenter Competition and JPL Section Challenge, April 7, 1988.
- Fld 279 JPL IOM, re: Section 331 Merit Review Rankings, April 8, 1987.
- Fld 280 JPL IOMs, re: Section 331 Activities Report for Week Endings 4/10/88 and 4/17/88, April 1988.
- Fld 281 JPL IOMs, pertaining to Section 331 Personnel matters, Digital Systems Research Group Supervisor Candidate Interviews, section surplus list, scheduled walks and bi-monthly status reviews, April 1988.
- Fld 282 JPL IOM, re: Section 331 Activities Report for Week Ending 4/24/88, April 26, 1988.
- Fld 283 JPL IOMs, pertaining to Section 331 Personnel matters, after-hours on-lab parking and supervisor appointment, April – May 1988.
- Fld 284 JPL IOM, re: Section 331 Activities Report for Week Ending 5/1/88, May 3, 1988.
- Fld 285 JPL IOMs, pertaining to Section 331 Personnel matters, surplus ADP Equipment, surplus list request, multiple parking citations off-lab, earthquake safety inspection and FY'89 facilities Mod and Rehab Funds, May 1988.
- Fld 286 JPL IOM, re: Section 331 Activities Report for Week Ending 5/15/88, May 18, 1988.
- Fld 287 JPL IOMs, pertaining to Section 331 Personnel matters, Summer 1988 Professional Development Enrollment and Action Item Annual Reports, May 1988.
- Fld 288 JPL IOMs, re: Section 331 Activities Report for Week Endings 5/22/88, 5/29/88 and 6/5/88, May 1988.
- Fld 289 JPL IOM, re: Advanced Call and Guidelines for Proposals to the Director's Discretionary Fund for FY'89, June 8, 1988.
- Fld 290 JPL IOM, re: NASA Technology Utilization Display and Transfer Showcase, June 13, 1988.
- Fld 291 JPL IOMs, pertaining to Section 331 Personnel matters, new RTOP 70 manager and improvement in performance evaluations, June 1988.
- Fld 292 JPL IOMs, re: Section 331 Activities Report for Week Endings 6/12/88, 6/26/88, 7/3/88 and 7/10/88, June and July 1988.
- Fld 293 JPL IOMs, pertaining to Section 331 Personnel matters, want ads, ADP Equipment Acquisition, office automation needs, input for 1988 Highlights and Fall Group Supervisor Workshop, July 1988.
- Fld 294 JPL IOM, re: Additional Chip for DDF-2, July 20, 1988.
- Fld 295 JPL IOM, re: Section 331 Response to Call for Capital Equipment Requests, July 22, 1988.

- Fld 296 JPL IOMs, re: Section 331 Activities Report for Week Endings 8/7/88, 8/14/88 and 8/21/88, August 1988.
- Fld 297 JPL IOM, re: Professional Development Enrollment by Invitation – Fall 1988, August 17, 1988.
- Fld 298 JPL IOM, re: Section 331 estimated TDA over runs for FY'88, August 26, 1988.
- Fld 299 JPL IOM, re: Section 331 Activities Report for Week Ending 8/28/88, August 30, 1988.

**Box 5 of 17**

- Fld 300 JPL IOM, re: Environmental Testing Forecast for FY'89, August 31, 1988.
- Fld 301 JPL IOMs, re: JPL Design Process of Valid-based CAE System Workstations and Actions, September 2, 1988 and September 29, 1988.
- Fld 302 JPL IOMs, re: Section 331 Activities Report for Week Endings 9/4/88 and 9/11/88, September 1988.
- Fld 303 JPL IOMs, pertaining to Section 331 Personnel matters, walks for Group Zero, after-hours on-lab parking and Division 33 CAE Inventory, October 1988.
- Fld 304 JPL IOMs, re: JPL Internal Survey on the Use of Blanket Contractor Personnel, October 24 and 28, 1988.
- Fld 305 JPL IOMs, pertaining to Section 331 Personnel matters, appointment of David Hills as Goldstone Solar System Radar Task Manager, 1989 President's Fund Proposals and Computer Network Survey, November – December 1988.
- Fld 306 JPL IOM, re: Functional Integration Segment of the Institutional Plan, January 11, 1989.
- Fld 307 JPL IOM, re: Exemption from Jury Duty – Critical Skills, January 16, 1989.
- Fld 308 JPL IOMs, re: Section 331 Activities Report for Week Endings 1/5/89, 1/22/89 and 2/12/89, January – February 1989.
- Fld 309 JPL IOM, re: Special Facility Mods and Rehab Budget, February 7, 1989.
- Fld 310 JPL IOMs, pertaining to Section 331 Personnel matters, changing in keying of door locks and Karen Deutsch's temporary employment, February 1989.
- Fld 311 JPL IOM, re: Comments, answers and questions from the D-5000 review, February 21, 1988.
- Fld 312 JPL IOMs, re: Section 331 Activities Report for Week Ending 2/19/89 and 2/26/89, February 1989.
- Fld 313 JPL IOMs, pertaining to Section 331 Personnel matters, candidates to support SDIO Phase 1, new supervisor for the Signals Analysis Group and new employee seminar, February – March, 1989.



- Fld 314 JPL IOM, re: Section 331 Activities Report for Week Ending 3/12/89, March 7, 1989.
- Fld 315 JPL IOM, re: Merit Review and Performance Evaluation, March 10, 1989.
- Fld 316 JPL IOMs, re: Section 331 Activities Report for Week Endings 3/19/89, 3/26/89 and 4/2/89, March – April 1989.
- Fld 317 JPL IOMs, pertaining to Section 331 Personnel matters, second parking violation off-lab, CAE Link details, required physical and eye examinations and 1989-90 recruiting schedule, April 1989.
- Fld 318 JPL IOMs, re: Section 331 Activities Report for Week Ending 4/9/89, 4/16/89 and 4/30/89, April – May 1989.
- Fld 319 JPL IOMs, pertaining to Section 331 Personnel matters, property loss report and TDA Progress Report, April – May 1989.
- Fld 320 JPL IOMs, re: Section 331 Activities Report for Week Endings 5/7/89 and 5/14/89, May 1989.
- Fld 321 JPL IOMs, pertaining to Section 331 Personnel matters, review of three patients by C.E. Pfund on optical communications, chart reviews and AAP Plotting software, May 1989.
- Fld 322 JPL IOMs, re: Section 331 Activities Report for Week Endings 5/21/89, 5/28/89, 6/4/89, 6/11/89 and 6/19/89 May – June 1989.
- Fld 323 JPL IOMs, re: Response to Potential NASA Ada and Software Management Standards from David Lame, June 21-23, 1989.
- Fld 324 JPL IOMs, re: Section 331 Activities Report for Week Endings 6/25/89, 7/3/89, 7/9/89, 7/16/89 and 7/23/89, June – July 1989.
- Fld 325 JPL IOMs, pertaining to Section 331 Personnel matters, Contractors in Critical Positions and Japanese Students at JPL, July 1989.
- Fld 326 JPL IOMs, re: Section 331 Activities Report for Week Ending 7/30/89 and 8/13/89, August 1989.
- Fld 327 JPL IOMs, pertaining to Section 331 Personnel matters, Professional Development Enrollment by Invitation, Reorganization within the Communications Systems Research Section, division safety inspections, college recruiting technical seminars, interviews, FY'90 Burden Billet requirements and appointment of Steve Morris as supervisor of the new Signal Processing Engineering group, August – October 1989.
- Fld 328 JPL IOMs, re: Section 331 Activities Report for Week Endings 8/20/89, 8/27/89, 10/1/89, 10/15/89 and 10/22/89, August – October 1989.
- Fld 329 JPL IOMs, pertaining to Section 331 Personnel matters, TDA Progress Report, Property Loss Reports, Building and Floor Warden Updates and appointment of Robin Winkelstein as supervisor of the Defense Communications Systems group, October – November 1989.

Fld 330 JPL IOM, re: Section 331 Activities Report for Week Endings 10/29/89, 11/12/89, 11/19/89 and 11/26/89, October – November 1989.

JPL Interoffice Memorandums by Alfred R. Paiz:

Fld 331 JPL IOM, re: ASAS SRM Staffing, November 18, 1987.

Fld 332 JPL IOM, re: Update of Section 331 Technology Status, December 1, 1987.

Fld 333 JPL IOM, re: Caltech President's Fund Proposals for 1988, December 1, 1987.

Fld 334 JPL IOM, re: Probability Distribution Function (PDF) Proposal Summaries, December 8, 1987.

Fld 335 JPL IOM, re: Prediction of Future SAR Processor Capability, December 29, 1987.

Fld 336 JPL IOMs, pertaining to Section 331 Personnel matters, 1988 Advance Development Programs and meeting of the staff, December 1987.

Fld 337 JPL IOM, re: ASAS Applications Software Transition Plan, January 12, 1988.

Fld 338 JPL IOM, re: Potential New Business with SDIO SATKA Program, January 19, 1988.

Fld 339 JPL IOM, re: Call for Mission Concepts for DARPA Lightweight Satellite Technology (LIGHTSAT) Demonstration Program, January 20, 1988.

Fld 340 JPL IOM, re: ASAS Applications Software Transition Plan, January 26, 1988.

Fld 341 JPL IOM, re: Army Land Mobile Communications Concept, February 4, 1988.

Fld 342 JPL IOM, re: Resume of Prescilla Ortiz, February 10, 1988.

Fld 343 JPL IOM, re: Want Ads, February 16, 1988.

Fld 344 JPL IOM, re: Technology Program (TAP) Guidelines Distributed at 15 Feb 88 TAP Representatives (REP) Meeting, February 17, 1988.

Fld 345 JPL IOM, re: Call for NASA Technology Program Authority (PA)'s, February 18, 1988.

Fld 346 JPL IOM, re: TDA Workforce Reduction Impact, Section 331, February 18, 1988.

Fld 347 JPL IOM, re: Advertisement in "Physics Today" Magazine, February 18, 1988.

Fld 348 JPL IOM, re: 1988 Summer Faculty Fellowship Program, February 22, 1988.

Fld 349 JPL IOMs, re: Resumes of Barbara Adams, Dr. Liz Kendall and Joseph Chiara, February 22, 1988.

Fld 350 JPL IOMs, pertaining to Section 331 Personnel matters, want ads, TAP Track 2 reviews and follow-on work with David Fielder, February – March 1988.

- Fld 351 JPL IOM, re: Read-ahead Package for Division 33 Track 2 Reviews, March 18, 1988.
- Fld 352 JPL IOM, re: Agenda for NASA Technology Review 12 April 1988, April 12, 1988.
- Fld 353 JPL IOM, re: Resume of Rosa Navaro, April 12, 1988.
- Fld 354 JPL IOM, re: Communications Research Ideas Supporting the National Communication System, May 18, 1988.
- Fld 355 JPL IOM, re: Levitt Presentation at CECOM, April 19, 1988.
- Fld 356 JPL IOM, re: ASAS Comm System Deliverables, May 25, 1988.
- Fld 357 JPL IOM, re: Interplanetary Correction Maneuver (ICM) Recover Plan, May 26, 1988.
- Fld 358 JPL IOM, re: ASAS/Enemy Situation Correlation Element ENSCE Fiscal Year (FY)-88 Budget Guidelines and Planned Changes, May 26, 1988.
- Fld 359 JPL IOM, re: attached NASA Report, titled: MSAT-X: A Technical Introduction and Status Report, by Khaled Dessouky and Miles Sue, April 15, 1988.

**Box 6 of 17**

- Fld 360 JPL Proposal, titled: Concept Paper Submitted to Defense Advanced Research Projects Agency on Data Compression and Source Coding, July 11, 1988. Also includes Cover Letter, dated: July 11, 1988.
- Fld 361 JPL IOM, re: Exemplary Performance during R2/3 System Requirements Review (SRR), July 12, 1988.
- Fld 362 JPL IOM, re: 1988 DDF Proposals, July 14, 1988.
- Fld 363 JPL IOM, re: ASAS/ENSCE Manpower Relocation to Building 126, July 25, 1988.
- Fld 364 JPL IOM, re: 1988 JPL Highlights, August 1, 1988.
- Fld 365 JPL IOM, re: JAMH Questions, August 2, 1988.
- Fld 366 JPL IOMs, pertaining to Section 331 Personnel matters, Deputy Manager Appointment, Job Applications, agenda for University of Utah (UU) Seminars, Technical Application UAV problems and Parking Violations, August – September 1988.
- Fld 367 JPL IOMs, re: Section 331 Response to New TDA Workforce Allocation, September 1988.
- Fld 368 JPL IOM, re: PAWS-to-PAWS Comm Interface Task Plan, October 4, 1988.
- Fld 369 JPL IOM, re: Clarification of the Sensitive Compartment Information (SCI) Nondisclosure Agreement (NDA), October 5, 1988.
- Fld 370 JPL IOM, re: Thoughts on Host Interface Unit (HIU) Functionality and ASAS Benefit Assessment, October 6, 1988.

Fld 371 JPL IOM, re: DDF Results, October 11, 1988.

Fld 372 JPL IOM, re: EUCOM Support, October 26, 1988.

Fld 373 JPL IOM, re: Requirements Definition for the HIU, October 31, 1988.

Fld 374 JPL IOM, re: Technology Opportunities with Army Research Office (ARO), November 8, 1988.

Fld 375 JPL IOM, re: Design to Cost Questionnaire, November 28, 1988.

Fld 376 JPL IOM, re: HIU Specification Review, December 6, 1988.

Fld 377 JPL IOM, re: FY'90 TDA Allocation, December 20, 1988.

JPL Interoffice Memorandums by William Rafferty:

Fld 378 JPL IOM, re: Voyager 2 Tracking with the Deep Space Network (DSN) Advanced Receiver at Uranus Encounter, February 12, 1985.

Fld 379 JPL IOM, re: Single Source Justification for the Digital Equipment Corporation, February 13, 1986.

Fld 380 JPL IOM, re: Availability of Telemetry Predicts for the DSN Advanced Receiver Field Tests at Deep Space Station (DSS)-13, February 24, 1986.

Fld 381 JPL IOM, re: Proposed MSAT-X Dual Pilot Base-band Demodulator, April 9, 1986.

Fld 382 JPL IOM, re: Dual Pilot Modulator Testing prior to the Pilot Field Experiment (PiFEx-1), May 12, 1986.

Fld 383 JPL IOM, re: Phase Error Jitter Measurements on the Advanced Receiver Residual Carrier Phase-Locked Loop, May 14, 1986.

Fld 384 JPL IOM, re: Dual Pilot Modulator Configuration for the Pilot Field Experiment (PiFEx-1), July 1, 1986.

Fld 385 JPL IOM, re: Omninet Mobile Terminal Demonstration in San Diego, California, July 24, 1986.

Fld 386 JPL IOM, re: Proposed Advanced Terminal Involvement in the PiFEx-3 Field Trial, August 22, 1986.

Fld 387 JPL IOM, re: Progress Review of the University of California Santa Barbara's (UCSB) 4800 bps Speech Coding Contract at UCSB August 18, 1986, September 3, 1986.

Fld 388 JPL IOM, re: UCSB FY'87 Speech Contract Funding Distribution, September 24, 1986.

Fld 389 JPL Letter from William Rafferty (JPL) to Dr. Allen Gersho (UCSB), re: COMSAT Generated Mixed Speech Signal Tape, September 24, 1986.

Fld 390 JPL IOM, re: MSAT-X Experiment Summary, September 25, 1986.

Fld 391 JPL IOM, re: Trip Report of Visit to Georgia Tech. On 9/22/86 to discuss Speech Coder Contract Progress, October 1, 1986.

Fld 392 JPL IOM, re: Mobile Terminal Progress Review Meeting, October 9, 1986.

Fld 393 Letters from William Rafferty (JPL) to Dr. Allen Gersho (UCSB) and Dr. Thomas Barnwell (Georgia Institute of Technology), re: Speech Coder Integration Issues, October 22, 1986.

Fld 394 JPL IOMs, re: Networking and Speech Coder Requirements Definition for the Terminal Processor, October 22 and November 3, 1986.

Fld 395 JPL IOM, re: Details on the Mobile Terminal Progress Review Meeting, November 4, 1986.

Fld 396 JPL IOM, re: FY'87 Resource Guidelines Reminder, November 11, 1986.

Fld 397 JPL IOM, re: Agenda for Staff Meeting of 11/18/86, November 12, 1986.

Fld 398 JPL IOM, re: Task Management Audit, November 13, 1986.

Fld 399 JPL IOMs, re: IF/Baseband DPSK Demodulator / Detector, November 14 and 17, 1986.

Fld 400 JPL IOM, re: Changes and Additions to current MSAT-X WBS and SRMs, November 18, 1986.

Fld 401 JPL IOM, re: Section 331 Task Listing, December 3, 1986.

Fld 402 JPL IOM, re: Mobile Satellite and Japan Seminar, December 5, 1986.

Fld 403 JPL IOM, re: First Quarter FY'87 MSAT-X Progress Report Meeting, December 22, 1986.

Fld 404 JPL IOM, re: Data on Division Managed Tasks, January 5, 1987.

Fld 405 JPL IOM, re: MSAT-X First Quarter FY'87 Review Agenda, January 7, 1987.

Fld 406 JPL IOM, re: MSAT-X VAX 750 Minicomputer Maintenance Contract, January 7, 1987.

Fld 407 JPL IOM, re: AT&T Unsolicited Proposed on a MSAT-ISDN, February 16, 1987.

Fld 408 JPL IOM and Letter, re: Vocoder / Modem SRM, February 23, 1987.

Fld 409 JPL IOM, re: Purchase of Book using Macintosh (MAC) Toolbox, February 26, 1987.

Fld 410 JPL IOM, re: Demodulator Design Review of 3/9/87, February 27, 1987.

Fld 411 JPL IOM, re: Schedule for Demodulator Design Review and Vocoder Demo, February 27, 1987.

Fld 412 JPL IOM, re: Outstanding work to be performed by J. Rabkin for the MSAT-X modem subtask, March 4, 1987.

Fld 413 JPL IOM, re: Second Quarter FY'87 MSAT-X Task Review, March 10, 1987.

Fld 414 JPL IOM, re: Visit of C&S Antenna, U.K., Technical People to JPL, March 16, 1987.

Fld 415 JPL IOM, re: Hughes Communications at JPL, March 17, 1987.

Fld 416 JPL IOM, re: MSAT-X Second Quarter Project Review, March 26, 1987.

Fld 417 JPL IOM, re: Report for Week Ending 3/27/87, March 30, 1987.

Fld 418 JPL IOM, re: Suspension of Negotiation on the AT&T Unsolicited MSAT-ISDN Proposal, March 31, 1987.

Fld 419 JPL IOM, re: MSAT-X First and Second Quarter FY'87 Obligations Status, April 7, 1987.

Fld 420 JPL IOM, re: PiFEx Field Testing, April 10, 1987.

Fld 421 JPL IOM, re: Data Eye Diagrams, May 19, 1987.

Fld 422 JPL IOM, re: FY'88 Plans and Work Breakdown Structures (WBS), May 27, 1987.

Fld 423 JPL IOM, re: Call for Papers – Fourth International Conference on Satellite Systems for Mobile Communication and Navigation, 17-19 October 1988, May 29, 1987.

Fld 424 JPL IOM, re: JPL sponsored Mobile Satellite Communications Conference to be held in Spring 1988, June 3, 1987.

Fld 425 JPL IOM, re: Request for After Hours On-Lab Parking for Lynn Polite, June 4, 1987.

Fld 426 JPL IOM, re: Justification for the Noncompetitive Renewal of Contract No. MH-846650 for the Services of L.D. Polite from Telos Corporation, June 22, 1987.

Fld 427 JPL IOM, re: FY'88 Satcom Workforce Reduction Impact on Section 331, June 24, 1987.

Fld 428 JPL IOM, re: Pre-publication review of MSAT-X related material, June 26, 1987.

Fld 429 JPL IOM, re: FY'88 Subtask Activities Presentations, June 26, 1987.

Fld 430 JPL IOM, re: MSAT-X FY'88 Work Force, June 9, 1987.

Fld 431 JPL IOM, re: FY'88 Workforce, June 19, 1987.

Fld 432 JPL IOM, re: Mechanical Antenna Contract, July 13, 1987.

Fld 433 JPL IOM, re: Terminal Processor "Point-To-Point" Protocol Implementation, July 13, 1987.

Fld 434 JPL IOM, re: Speech Contracts, July 13, 1987.

- Fld 435 JPL IOM, re: Preparation for upcoming visits to Ball Aerospace and Teledyne Ryan, July 13, 1987.
- Fld 436 JPL IOM, re: Call for Topic Titles for JPL Highlights 1988, August 4, 1987.
- Fld 437 JPL IOM, re: Third Quarter Obligations Status, August 4, 1987.

**Box 7 of 17**

JPL Interoffice Memorandums by Jewell Huls:

- Fld 438 Group of JPL IOMs, pertaining to Section 331 Business Cards, August 2, 1985 – July 19, 1988.
- Fld 439 JPL IOM, re: TDA Cut List for FY'86 and BCF's for FY'87 and beyond, December 18, 1985.
- Fld 440 JPL IOMs, pertaining to Section 331 Personnel matters, personal holidays, after-hours on-lab parking, library books, lost keys, supervisor appointments and division managed tasks, May 1, 1986 – January 15, 1987.
- Fld 441 JPL IOMs, re: Massachusetts Institute of Technology (MIT) Day at JPL, December 10, 1986.
- Fld 442 JPL IOMs, pertaining to Section 331 Personnel matters, funding assistance, window blinds installation, fire inspections, contractor workforce forecast, training status, travel budget and work orders, June 9, 1987 – October 22, 1987.
- Fld 443 JPL IOMs, pertaining to Section 331 Personnel matters, property inventory, office automation equipment questionnaires, travel budget and foreign conference travel, December 1987.
- Fld 444 JPL IOM, re: Goldstone Solar System Radar Brochures, January 19, 1988.
- Fld 445 JPL IOMs, pertaining to Section 331 Personnel matters, requests for surplus office automated equipment, Journal requests, property signature cards, carpooling to Goldstone and signal trailers, April 7, 1988 – July 13, 1988.
- Fld 446 JPL IOM, re: Work Authorization Document (WAD), Exercise for Fiscal Years 1989 – 1994, July 20, 1988.
- Fld 447 JPL IOM, re: Task Implementation Plans, September 21, 1988.
- Fld 448 JPL IOMs, pertaining to Section 331 Personnel matters, walk through inspections and travel budget proposals and allocations, October 26, 1988 – December 12, 1988.

Section 331 Miscellaneous JPL Interoffice Memorandums and other Correspondence:

- Fld 449 JPL IOM, re: Appointments for Eye Examination, February 25, 1985.
- Fld 450 JPL IOM, re: Section 331 Submission of funding request for Resident Research Associateships, July 3, 1985.
- Fld 451 JPL IOM, re: Required Physical and Eye Examinations, January 29, 1986.

Fld 452 Letter from Columbia University, re: Computer Communications Networks, February 7, 1986.

Fld 453 JPL IOMs, re: Section 331 weekly activities for week ending 2/7/86 and Jury Duty, February 1986.

Fld 454 JPL IOM, re: Call for Nominations for the 1986 NASA Annual Honor Awards, February 19, 1986.

Fld 455 JPL IOM, re: Workshop on Magnetic Recording Research, February 24, 1986.

Fld 456 JPL IOMs, pertaining to Section 331 Personnel matters, training schedules, unlicensed software and Goldstone travel, February – March 1986.

Fld 457 JPL IOM, re: NASA Awards Evaluation Questionnaire, March 28, 1986.

Fld 458 JPL IOM, re: Performance Evaluations, April 18, 1986.

Fld 459 JPL IOM, re: Foreign Travel Forecast 1 October 1986 through 30 September 1987, July 30, 1986.

Fld 460 JPL IOM, re: Request for Non-competitive Source Evaluation Board, November 20, 1986.

Section 331 Action Item JPL Interoffice Memorandums for 1987:

Fld 461 JPL IOM, re: Expansion of Software Library to include Minicomputer and Workstation Software, March 27, 1986.

Fld 462 JPL IOM and Handwritten notes, re: FY'88 Mod and Rehab Funds, April 30, 1987.

Fld 463 JPL IOM, re: Inquiry of U.S. Patent Numbers 4,279,036 and 4,664,518, July 6, 1987.

Fld 464 JPL IOM, re: CSMT Scientific Advisory Board and Distinguished Visiting Scientists, July 8, 1987.

Fld 465 JPL IOM, re: Response to Questionnaire, GAO Study of Foreign Access to NASA Centers, July 16, 1987.

Fld 466 JPL IOM, re: Call Letter for FY-90 Construction of Facilities Projects, July 6, 1987.

Fld 467 JPL IOM, re: Tour Site Description, August 4, 1987.

Fld 468 JPL IOM, re: Magnetic Tapes Stored at the Federal Records Center, June 10, 1986.

Fld 469 JPL IOM, re: Candidates for Japan, May 14, 1987.

Fld 470 JPL IOM, re: Performance Evaluation of the DSN Bendix Contract, September 10, 1987.

Fld 471 JPL IOM, re: FY'88 Conference Travel Budget Proposal, College Recruiting Needs, October 22, 1987.



Fld 472 JPL IOM, re: Update of Section ADP Reps listings, November 2, 1987.

Fld 473 JPL IOM, re: Contractors in Critical Positions, November 4, 1987.

Fld 474 JPL IOM, re: NASA Annual Quality and Productivity Improvement Report for FY'87, November 2, 1987.

Fld 475 JPL IOM, re: Nominations for Senior Research Scientists and Engineers, November 18, 1987.

Fld 476 JPL IOM, re: American Institute of Aeronautics and Astronautics (AIAA) Technical Committee (TC) Nominations, November 17, 1987.

Fld 477 JPL IOM, re: Nominations for Senior Research Scientists and Engineers, November 18, 1987.

Fld 478 JPL IOM, re: Update of Section 331 Technology Status, December 1, 1987.

Fld 479 JPL IOM, re: Call and Guidelines for Nomination of Candidates for 1988 NASA Manned Flight Awareness Program Honoree Events, November 13, 1987.

Fld 480 JPL IOM, re: JPL Annual Report, October 23, 1987.

Fld 481 JPL IOM, re: New Security Briefing Form (Standard Form (SF) 189-A, Classified Information Nondisclosure Agreement), October 28, 1987.

Fld 482 JPL IOM, re: Subtopics for the 1988 SBIR Program Solicitation, December 7, 1987.

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**Box 8 of 17**

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**Box 9 of 17**

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**Box 10 of 17**

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**Box 11 of 17**

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**Box 12 of 17**

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**Box 13 of 17**

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**Box 14 of 17**

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- Fld 686 JPL IOM, re: Unmanned Aerial Vehicles (UAV) TAP Task Implementation Plan, May 1, 1989.
- Fld 687 JPL Letter from Donald W. Kurtz to LTC. Edward Nicastrì (Defense Advanced Projects Agency), re: ASAS/ENSCE Technical Approach, October 2, 1989.
- Fld 688 JPL Reports, titled: Tasks of Potential IEW-JPL Interest and MSAT331 Plan versus actual totals, October 5, 1989.
- Fld 689 U.S. Army Communications Report, titled: Joint Advanced Special Operations Radio System (JASORS), by Donald Upmal, not dated.
- Fld 690 JPL IOM, re: Review of the Rough Draft of the JPL Performance Report for FY'89, Third Increment, November 21, 1989.

JPL Section 331 Miscellaneous Correspondence Memorandums and Reports:

- Fld 691 JPL Research and Technology Objectives and Plans Report, titled: Communications Systems Research, May 7, 1986.
- Fld 692 JPL Research and Technology Objectives and Plans Report, titled: Optical Communication Technology Development, May 7, 1986.
- Fld 693 JPL Research and Technology Objectives and Plans Report, titled: Network Signal Processing, May 7, 1986.

- Fld 694 JPL Research and Technology Objectives and Plans Report, titled: Frequency and Timing Research, May 9, 1986.
- Fld 695 JPL Research and Technology Objectives and Plans Report, titled: Communications Systems Research, April 5, 1989.
- Fld 696 JPL Research and Technology Objectives and Plans Report, titled: Viterbi Decoder Development, April 5, 1989.
- Fld 697 JPL Research and Technology Objectives and Plans Report, titled: Optical Communications Technology Development, April 9, 1989.
- Fld 698 JPL Research and Technology Objectives and Plans Report, titled: Frequency and Timing Research, April 10, 1989.
- Fld 699 JPL Research and Technology Objectives and Plans Report, titled: Mobile Communication Technology Development, June 1, 1989.

Capital Equipment and Instrumentation Documents:

- Fld 700 JPL IOM, re: Capital Equipment for FY'86, September 4, 1985.
- Fld 701 JPL IOM, re: Call for Inputs from the Divisions to the Multi-Year Technical Equipment Acquisition Plan, January 16, 1986.
- Fld 702 JPL IOMs, re: Future Capital Equipment Needs, January 30, 1986.
- Fld 703 JPL IOM, re: Capital Equipment Needs, February 6, 1986.
- Fld 704 JPL IOM, re: Technical Equipment Acquisition Plan, Request for Inputs and Related Matters, April 10, 1986.
- Fld 705 JPL IOM, re: Capital Equipment Needs, September 22, 1986.
- Fld 706 JPL IOM, re: Division 33 Requests for the Equipment and Instrumentation Committee for FY'87, October 7, 1986.
- Fld 707 JPL IOM, re: Equipment and Instrumentation Committee – Capital Equipment for FY'87 and Plans for FY'88, January 20, 1987.
- Fld 708 JPL IOM, re: Listing of Amount Remaining on FY'86 Initiated Loan Agreements Payments through February 1987, February 16, 1987.
- Fld 709 JPL IOM, re: Future Capital Equipment Needs, February 18, 1987.
- Fld 710 JPL IOM, re: CSMT Five Year Capital Equipment plans and acquisitions, May 8, 1987.
- Fld 711 JPL IOM, re: Capital Equipment for FY'88, August 17, 1987.
- Fld 712 JPL IOM, re: Capital Equipment Needs for FY'88, September 1, 1987.

**Box 15 of 17**

- Fld 713 AIAA Technical Committee (TC) Nominations Forms for 1986.
- Fld 714 JPL IOMs, Handwritten Notes, Reports and Charts, re: Format A's for FY'86. 1985.
- Fld 715 JPL IOMs, Reports and Proposals, re: FY'86 Director's Discretionary Fund Proposals, July – August 1985.
- Fld 716 JPL IOMs, Reports and Proposals, re: FY'87 Director's Discretionary Fund Proposals, July – August 1986.
- Fld 717 JPL Reports, re: Architectures and Algorithms for Very High Speed Digital Filtering and Modified Viterbi Decoding for Images, not dated.
- Fld 718 JPL IOMs, Reports and Proposals, re: FY'88 Director's Discretionary Fund Proposals, July – August 1987.
- Fld 719 JPL IOMs, Reports and Proposals, re: FY'89 Director's Discretionary Fund Proposals, July – November 1987.
- Fld 720 JPL IOMs, re: FY'87 and FY'88 Conference Travel Allocations, December 1986 – December 1987.
- Fld 721 JPL IOM, re: the attached NASA Phase 2 Proposal Evaluation Small Business Innovation Research (SBIR) Program, November 10, 1986.
- Fld 722 JPL IOM, re: CIT Summer Undergraduate Research Fellowship (SURF) Program, January 14, 1986.

**Box 16 of 17**

- Fld 723 JPL Section 331 Document Review, External Reports / Open Literature Authorizations, September 22, 1986 – December 21, 1986.
- Fld 724 JPL Section 331 Document Review, External Reports / Open Literature Authorizations, December 22, 1986 – November 22, 1987.
- Fld 725 JPL Section 331 Document Review, External Reports / Open Literature Authorizations, December 21, 1987 – December 20, 1988.
- Fld 726 JPL IOMs, Reports and Proposals, pertaining to Caltech President's Fund Proposals for JPL Section 331, November 21, 1986 – November 19, 1987.
- Fld 727 JPL IOM, Reports and Proposals, pertaining to Caltech President's Final Fund Proposals for JPL Section 331, December 16, 1986 – January 30, 1987.
- Fld 728 JPL IOMs, Reports and Proposals, pertaining to 1988 Caltech President's Fund Proposals for JPL Section 331, November 19, 1987 – February 28, 1989.

- Fld 729      Handwritten JPL Section 331 Meeting Minute Notes by Dr. Leslie J. Deutsch, April 3, 1986 – July 1, 1986.
- Fld 730      Handwritten JPL Section 331 Meeting Minute Notes by Dr. Leslie J. Deutsch, August 5, 1986 – December 22, 1986.
- Fld 731      Handwritten JPL Section 331 Meeting Minute Notes by Dr. Leslie J. Deutsch, January 7, 1987 – May 22, 1987.

**Box 17 of 17**

- Fld 732      Handwritten JPL Section 331 Meeting Minute Notes by Dr. Leslie J. Deutsch, June 1, 1987 – December 14, 1987.
- Fld 733      Handwritten JPL Section 331 Meeting Minute Notes by Dr. Leslie J. Deutsch, January 6, 1988 – April 29, 1988.
- Fld 734      Handwritten JPL Section 331 Meeting Minute Notes by Dr. Leslie J. Deutsch, May 10, 1988 – December 12, 1988.
- Fld 735      JPL Section 331 Travel Vouchers and Reports for January 1989.
- Fld 736      JPL Section 331 Travel Vouchers and Reports for February 1989.
- Fld 737      JPL Section 331 Travel Vouchers and Reports for March 1989.
- Fld 738      JPL Section 331 Travel Vouchers and Reports for April 1989.
- Fld 739      JPL Section 331 Travel Vouchers and Reports for May 1989.
- Fld 740      JPL Section 331 Travel Vouchers and Reports for June 1989.
- Fld 741      JPL Section 331 Travel Vouchers and Reports for July 1989.
- Fld 742      JPL Section 331 Travel Vouchers and Reports for August 1989.
- Fld 743      JPL Section 331 Travel Vouchers and Reports for September 1989.
- Fld 744      JPL Section 331 Travel Vouchers and Reports for October 1989.
- Fld 745      JPL Section 331 Travel Vouchers and Reports for November 1989.
- Fld 746      JPL Section 331 Travel Vouchers and Reports for December 1989.

**CATALOG DESCRIPTION**

JPL Communications and Systems Research Section 331 Collection, 1984-1989.

5.1 c.f. (746 folders)

The bulk of the collection consists of reports, memoranda, notes, letters, charts, diagrams, graphs and ledgers, pertaining to JPL Section 331's involvement with Communication Hardware and Software, the Deep Space Network (DSN) and the ASAS/ENSCE project. Also some of the documents pertain to Section 331



administrative matters, such as travel vouchers, resumes, retirement announcements, student internships and new hires, January 1985 – December 1989.

Register available in the repository.

## Tracings

Jet Propulsion Laboratory (U.S.)-History

Dr. Leslie J. Deutsch

Alfred R. Paiz

William Rafferty

Jewel Huls

Jet Propulsion Laboratory (U.S.)-Flight Projects

Jet Propulsion Laboratory (U.S.)-Communication System Software

Jet Propulsion Laboratory (U.S.)-Communication System Hardware

All Source Analysis System (ASAS) / Enemy Situation Correlation Element (ENSCE) Project

Deep Space Network (DSN)

Jet Propulsion Laboratory (U.S.) All Source Analysis System (ASAS) / Enemy Situation Correlation Element (ENSCE) Project

Jet Propulsion Laboratory (U.S.) Deep Space Network (DSN)

U.S. Army Development and Readiness Command (DARCOM)

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